

Figure 1 STRUCTURE OF A GENE

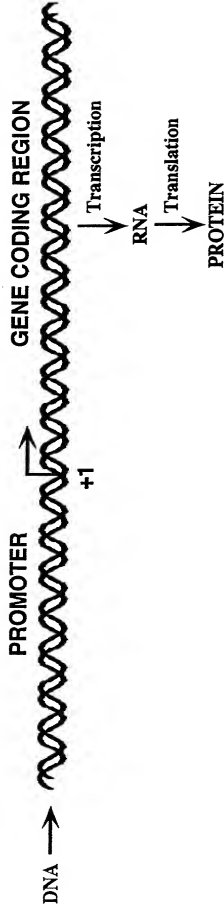
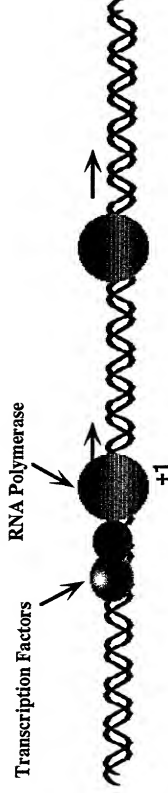


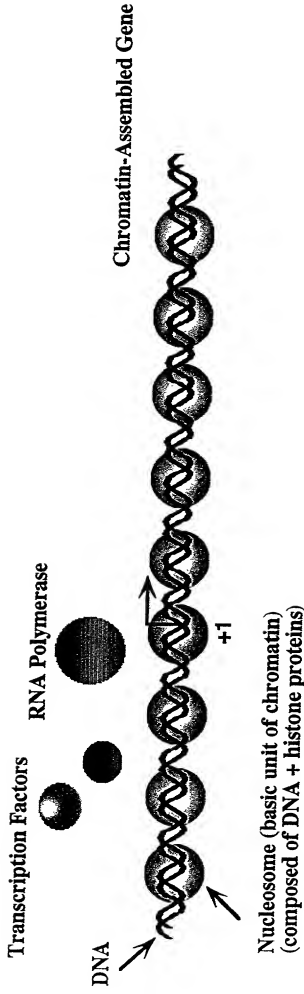
Figure 2 ACTIVE GENE



1. Transcription Factors and RNA Polymerase interact with promoter region

2. RNA Polymerase moves down the gene to read or "transcribe" the DNA coding sequence and produce mRNA

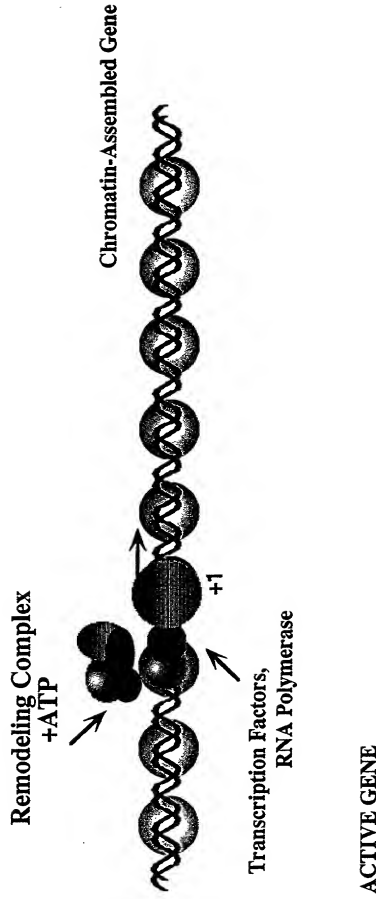
Figure 3 INACTIVE GENE (in Chromatin)



### INACTIVE GENE

Nucleosomes block accessibility of  
Transcription Factors and RNA Polymerase to DNA;  
Proteins cannot interact with promoter region  
to activate gene

Figure 4 ACTIVE GENE (in Chromatin)



Remodeling Complex (SWI/SNF, etc.) is targeted by Transcription Factor and "loosens" nucleosomal structure to facilitate interaction of Transcription Factor and RNA Polymerase with promoter DNA which activates the gene.

**SWI/SNF**  
Chromatin Remodeling Complex



Figure 5

**Chromatin Remodeling Complex**

**SWI/SNF minimal complex**



**BRG1**



Figure 6

# POSSIBLE MECHANISM OF SWI/SNF-DEPENDENT CHROMATIN REMODELING BY INTERACTION WITH ZINC-FINGER DNA BINDING PROTEINS

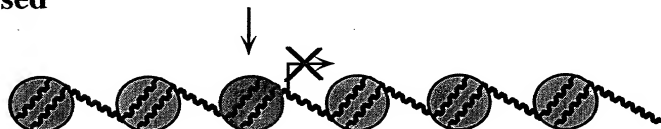
**Inactive**

SWI/SNF



Act Domain  
BAC 155  
Zn finger DBD BRC 1 SWI/SNF

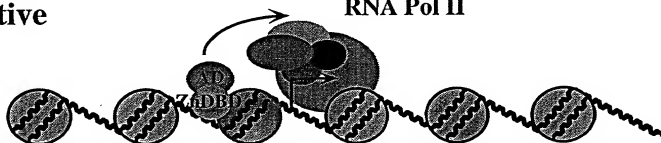
**Poised**



Chromatin Remodeling

**Active**

RNA Pol II



Transcription

09781992.021204

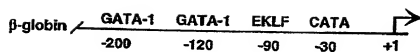


Fig 8

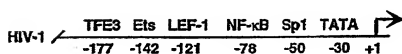


Fig 9



Fig 10